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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/591,577	06/09/2000	Charles A. Eldering	T702-03	2970
27832 7590 01/09/2008 TECHNOLOGY, PATENTS AND LICENSING, INC./PRIME 2003 SOUTH EASTON RD SUITE 208 DOYLESTOWN, PA 18901			EXAMINER RETTA, YEHDEGA	
			ART UNIT 3622	PAPER NUMBER
			MAIL DATE 01/09/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/591,577	ELDERING ET AL.	
	Examiner	Art Unit	
	Yehdega Retta	3622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 133-159 is/are pending in the application.
- 4a) Of the above claim(s) 140-151 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 133-139 and 152-159 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to the Request for Continued Examination filed October 31, 2007. Applicant amended claim 133 and 153. Claims 133-139 and 152-159 are pending.

Claim Rejections - 35 USC § 112

Claims 153-159 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 153 recites “retrieving heuristic rules, wherein said heuristic rules have been pre-defined prior to accessing said plurality of consumer transaction records and wherein said pre-defined heuristic rules have been developed through the application of at least one heuristic process which incorporates at least two types of analysis selected from the group consisting of exploratory problem-solving, self-learning, discovery, experiments, trial and error, inferences, educated guesses, market studies, human knowledge and experience”.

Applicant's specification does not teach what the heuristic process includes. Even though applicant provides definition of “heuristic rules” according to Webster dictionary, applicant's specification does not teach how the heuristic rules are determined.

Claims 153-159 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with

which it is most nearly connected, to make and/or use the invention. The specification does not disclose that the pre-defined heuristic rules have been developed through the application of at least one heuristic process which incorporates at least two types of analysis selected from the group consisting of exploratory problem-solving, self-learning, discovery, experiments, trial and error, inferences, educated guesses, market studies, human knowledge and experience”.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 133-139 and 152-159 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Hendricks et al. (US 6,463,585).

Regarding claims 133, 134, 153 and 155, Hendricks teach accessing a plurality of consumer transaction records corresponding to a plurality of consumers and demographic information records corresponding to at least some of the plurality of consumers (see col. 4 lines 12-17, col. 54-67, col. 5 lines 1-19, col. 11 lines 31-40, col. 20 lines 4-27, col. 26 line 48 to col. 27 line 6); retrieving heuristics rules, wherein said heuristic rules have been pre-defined prior to accessing said plurality of consumer records transaction records and wherein said pre-defined heuristic rules have been developed based on at least one of psychological or sociological study

(see col. 20 lines 35-48) (a simulated profile can be *generated using an algorithm similar to that described below that analyzes access history and viewing habits*. Using test information generated from a statistically significant number of viewers, the simulated profile algorithm *estimates the viewer's age, education, sex and other relevant information*) (col. 66 line 53 to col. 67 line 4); retrieving at least one target consumer characteristics from an advertiser that has been selected at the discretion of the advertiser (see *col. 29 line 5-44*, col. 30 lines 22-64, col. 31 lines 28-55); applying said pre-defined heuristic rules to said plurality of consumer transaction records to generate inferred transaction characteristics of the consumer; generating inferred (*judgment based from facts or observation*) consumer characteristics of at least one of the consumers by associating the inferred transaction characteristics with demographic information records and determining applicability of an advertisement to at least one of the consumers by correlating the inferred market characteristics obtained by the application of the pre-defined heuristic rules with the target market characteristics selected by the advertiser (see col. 35 lines 1-15, col. 44 lines 7-23, col. 66 line 27 to col. 67 line 4, col. 67 lines 53-62, col. 68 lines 48-55, col. 70 line 57 to col. 71 line 48). Hendricks teaches advertiser selecting at least one target consumer characteristic and determining applicability of an advertisement to the consumer. Hendricks teaches see (Table H) the data indicates that for ad 1, and targeting category 1 (ADI) the advertiser believes that ad 1 is appropriate for the viewers in groups 1 and 2 and is not appropriate for the viewers in groups 3 and 4. Hendricks teaches the advertiser also believes that ad 1 is equally appropriate for both the group 1 and the group 2 viewers, however, if the group 1 viewers been determined to be more likely to respond to ad 1 than the group 2 viewers, then group 1 could be given a higher percentage than group 2. Table H also shows that ad 1 is not applicable to groups 5 and 6

because only four groups are defined for the targeting category ADI, thus, all the set top terminals 220 will be grouped into one of groups 1 through 4 (see col. 35 lines 15-65).

Regarding claims 135-139 and 156-159, Hendricks teaches wherein the plurality of transaction includes purchase transactions (see col. 20 lines 20-34; wherein the demographic information is stored in a private consumer demographic database; the demographic information includes demographic location (see col. 5 lines 7-14, col. 29 lines 6-32); the demographic information stored in private database (see col. 11 lines 31-40, col. 29 lines 6-32, col. 44 lines 7-23); wherein the set of consumers are identified anonymously (see col. 44 lines 7-67).

Regarding claims 152, 154, Hendricks teaches the target consumer characteristics includes target demographic characteristic and target purchase characteristics (see col. 35 lines 15-65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 153-159 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hendricks further in view of Ho et al. (US 6,120,300).

Regarding claims 153 and 155, Hendricks teach accessing a plurality of consumer transaction records corresponding to a plurality of consumers and demographic information records corresponding to at least some of the plurality of consumers (see col. 4 lines 12-17, col. 54-67, col. 5 lines 1-19, col. 11 lines 31-40, col. 20 lines 4-48, col. 26 line 48 to col. 27 line 6);

retrieving heuristics rules, wherein said heuristic rules have been pre-defined prior to accessing said plurality of consumer records transaction records (see col. 20 lines 35-48) however does not explicitly teaches wherein the heuristic rules have been developed through the application of at least one heuristic process which incorporates at least two types of analysis selected from the group consisting of exploration problem-solving, self-learning, discovery, experiments, trial and error, inferences, educated guesses, market studies, human knowledge and experience. Ho teaches heuristically determining by statistics, based on the strengths and weaknesses or understanding of similar students in the subject. Ho also teaches heuristically determined by statistics based on the preferences of similar students (for example, students within a certain age group living in Sunnyvale, California, prefer certain types of toys or games). Ho teaches such information can be found through market research (see col. 5 line 60 to col. 6 line 2, col. 7 lines 5-24). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention for heuristic rules to be developed through application process which incorporates such type of analysis for the intended use to estimate user's demographic, preference or other relevant information as taught in Ho.

Regarding claims 156-159, Hendricks teaches wherein the plurality of transaction includes purchase transactions (see col. 20 lines 20-34; wherein the demographic information is stored in a private consumer demographic database; the demographic information includes demographic location (see col. 5 lines 7-14, col. 29 lines 6-32); the demographic information stored in private database (see col. 11 lines 31-40, col. 29 lines 6-32, col. 44 lines 7-23); wherein the set of consumers are identified anonymously (see col. 44 lines 7-67).

Regarding claim 154, Hendricks teaches the target consumer characteristics includes target demographic characteristic and target purchase characteristics (see col. 35 lines 15-65).

Response to Arguments

Applicant's arguments filed October 31, 2007 have been fully considered but they are not persuasive.

Applicant argues;

“The well-known definition above is precisely what is being described at column 20, lines 35-48 of Hendricks, namely that the access history and viewing habits of many users are compared with the habits of the present individual. Then, a simulated profile in Hendricks assumes that the subject viewer would like to watch something that is watched by one of the users whose profile is similar to that of the subject viewer. Heuristic rules, on the other hand, are rules "involving or serving as an aid to learning, discovery or problem solving by experimental and esp. trial-and error methods; *also*: of or relating to exploratory problem-solving techniques that utilize self-educating techniques (as the evaluation of feedback) to improve performance" (*Webster's New Collegiate Dictionary*, 9th ed.).

Thus, one skilled in the art would understand the term "heuristic rules" to mean one or more rules that are determined from learning, discovery, experiments, trial and error, inferences, educated guesses, market studies, human knowledge or experience. Based on the description and use of the term "heuristic rules" in the specification, Applicants further submit that the term "heuristic rules" and the application thereof as used in the present application is consistent with the ordinary meaning of the term as known to one skilled in the art. Accordingly, one skilled in the art would recognize that Hendricks does not teach or suggest the use of "heuristic rules" as recited in the present claims, specification or generally in the art. If anything, Hendricks teaches collaborative filtering”.

Examiner respectfully disagrees that there is any indication that Hendricks uses “collaborative filtering”. Examiner agrees that “heuristic rules” according to the dictionary is one or more rules that determined from learning or experiments etc. The definition does not indicate whether the information used, in learning or experiment, is specific to the user or other users. Also according to applicant’s specification, there is no indication that the

estimating of user behavior (as indicated in fig. 12A, see below) is achieved from known fact of the individual or from other users' information. For example the specification does not teach how the system comes into conclusion that young men change channels more often than young women or how the household income is determined based on the number of zaps.

The specification teaches as follows:

[01161 FIG. 12A illustrates sets of logical heuristics rules that form part of the heuristic rules 460. In a preferred embodiment, logical heuristic rules are obtained from sociological or psychological studies. Two types of rules are illustrated in FIG. 12A. The first type links an individual's viewing characteristics to demographic characteristics such as gender, age, and income level. A channel changing rate rule 1230 attempts to determine gender based on channel change rate. An income related channel change rate rule 1210 attempts to link channel change rates to income brackets. A second type of rules links particular programs to particular audience, as illustrated by a gender determining rule 1250 which links the program category 444/sub-category 446 with a gender. The result of the application of the logical heuristic rules illustrated in FIG. 12A are probabilistic determinations of factors including gender, age, and income level. Although a specific set of logical heuristic rules has been used as an example, a wide number of types of logical heuristic rules can be used to realize the present invention. In addition, these rules can be changed based on learning within the system or based on external studies that provide more accurate rules.

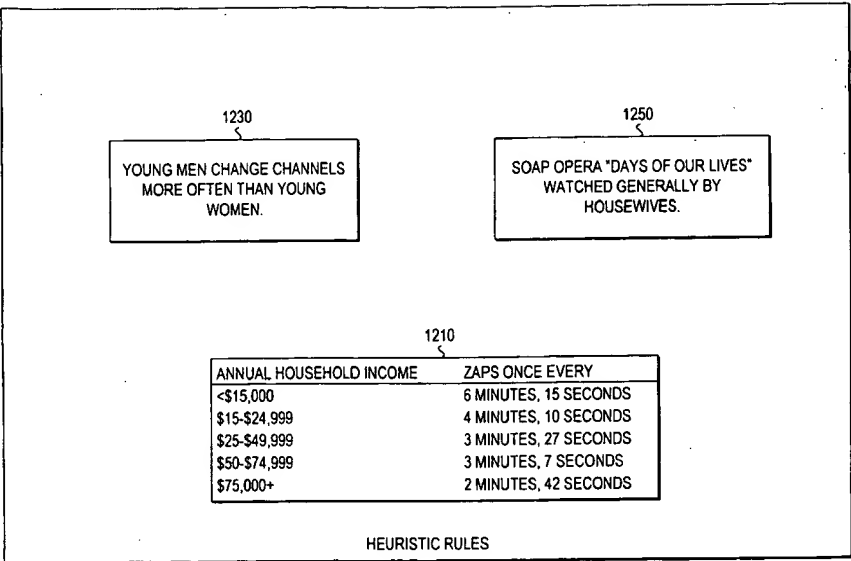


FIG. 12A

Also as indicated in one of applicant’s disclosure US 6,216,129 which is incorporated by reference discloses as follows:

FIG. 7 illustrates an example of heuristic rules including rules for defining a product demographics vector. From the product characteristics, a probabilistic determination of household demographics can be generated. Similarly, the monthly quantity purchased can be used to estimate household size. The heuristic rules illustrated in FIG. 7 serve as an example of the types of heuristic rules which can be employed to better characterize consumer 100 as a result of their purchases. The heuristic rules can include any set of logic tests, statistical estimates, or market studies which provide the basis for better estimating the demographics of consumer 100 based on their purchases.

Examiner provides support in Ho (US 6120300) that heuristic rules is used to determined user preference by statistics based on the preferences of similar students or based on the strengths and weaknesses or understanding of similar students in the subject (see col. 5 line 60 to col. 6 line 2, col. 7 lines 5-23).

Hendricks also teaches as follows:

The personal profile consists of demographic information that may be gathered in a number of ways. The set top terminal 220 builds the personal profile for each viewer and stores the information in a memory file by viewer name. To build a personal profile in the preferred system, the viewer answers a series of questions presented on a series of menu screens. These personal profile screens request the viewer to input information such as name, sex, age, place of birth, place of lower school education, employment type, level of education, amount of television program viewing per week, and the number of shows in particular categories that the viewer watches in a given week such as, sports, movies, documentaries, sitcoms, etc. Any demographic information which will assist the set top terminal 220 in targeting advertisements to the viewer may be used.

In addition to gathering demographics at the set top terminal 220, the personal profile can be compiled using other methods. For instance, the information can be gathered using questionnaires sent by mail and subsequently entered in the Viewer Profile Database 314 by the network controller's control station operator.

As an alternative to gathering demographic data, a **simulated profile can be generated using an algorithm similar to that described below that analyzes access history and viewing habits.** Using test information generated from a statistically significant number of viewers, the simulated profile algorithm estimates the viewer's age, education, sex and other relevant information. **The analysis requires reviewing the viewer's programs watched and statistically comparing the viewer's programs watched with the test group. Also, the algorithm can place the subscriber or viewer in a viewer category.** This analysis is

transparent from the subscriber's point of view and attempts to accurately profile the viewer.

Various viewers or viewer categories can later be targeted with different advertisements.

Applicant asserts that "even the Examiner concedes that heuristic rules are rules "in logical form [which] allow the system to apply generalization which have been learned from external studies to obtain a characterization of the subscriber and in the case of conditional probabilities, determination of the probable content of a program can be applied in a mathematical step to a matrix of conditional probabilities to obtain probabilistic subscriber profiles indicating program and product likes and dislikes as well as for determining probabilistic demographic data." (Office Action, page 5). Thus, by the Examiner's own admission, Hendricks' collaborative filtering technique only "analyzes access history and viewing habits" and does not "apply generalization[s] which have been learned from external studies."

Examiner would like to point out that the office action does not mention any use of collaborative filtering technique by Hendricks related the applicant's claims.


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ho et al. (US 6,120,300) teaches heuristically determined by statistics based on the preferences of similar students.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yehdega Retta whose telephone number is (571) 272-6723. The examiner can normally be reached on 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Stamber can be reached on (571) 272-6724. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Yehdega Retta
Primary Examiner
Art Unit 3622

YR